The Age-structural Theory of State Behavior

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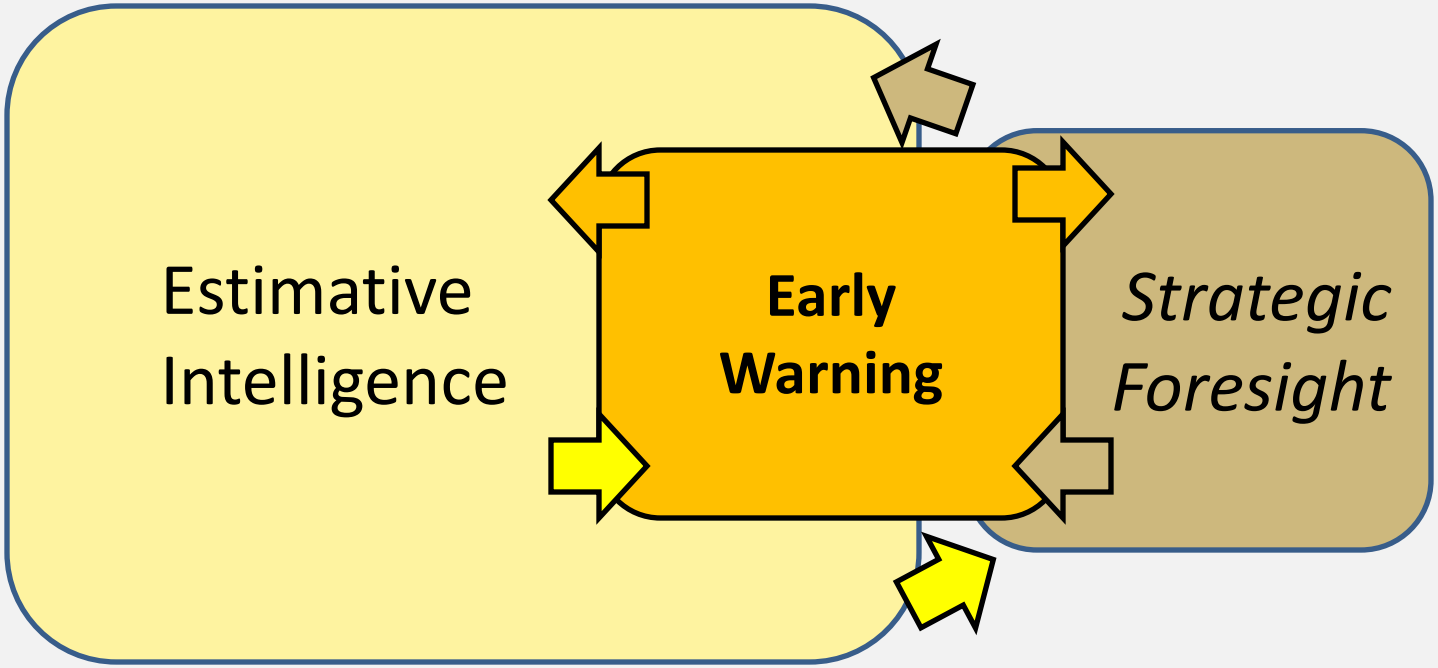
Feb. 27, 2019

Five "take home" concepts.

- Age structural transition (from youthful to more mature age structures).
- Age-structural domain (*age-structural time* vs. chronological time).
- Age-structural theory of state behavior (it's about expectations: social, economic, and political)
- AST is a scientific theory (testable statistical expectations, hypothesis rejection, rapid advance) vs. non-scientific explanatory narratives (no definitive tests, no hypothesis elimination, stagnation).
- Ideology (politico-secular as well as politico-religious) can over-power the expectations generated by demography (demography is not necessarily destiny).

The Anticipatory Fields of Intelligence

(Estimative, Early Warning, Foresight)

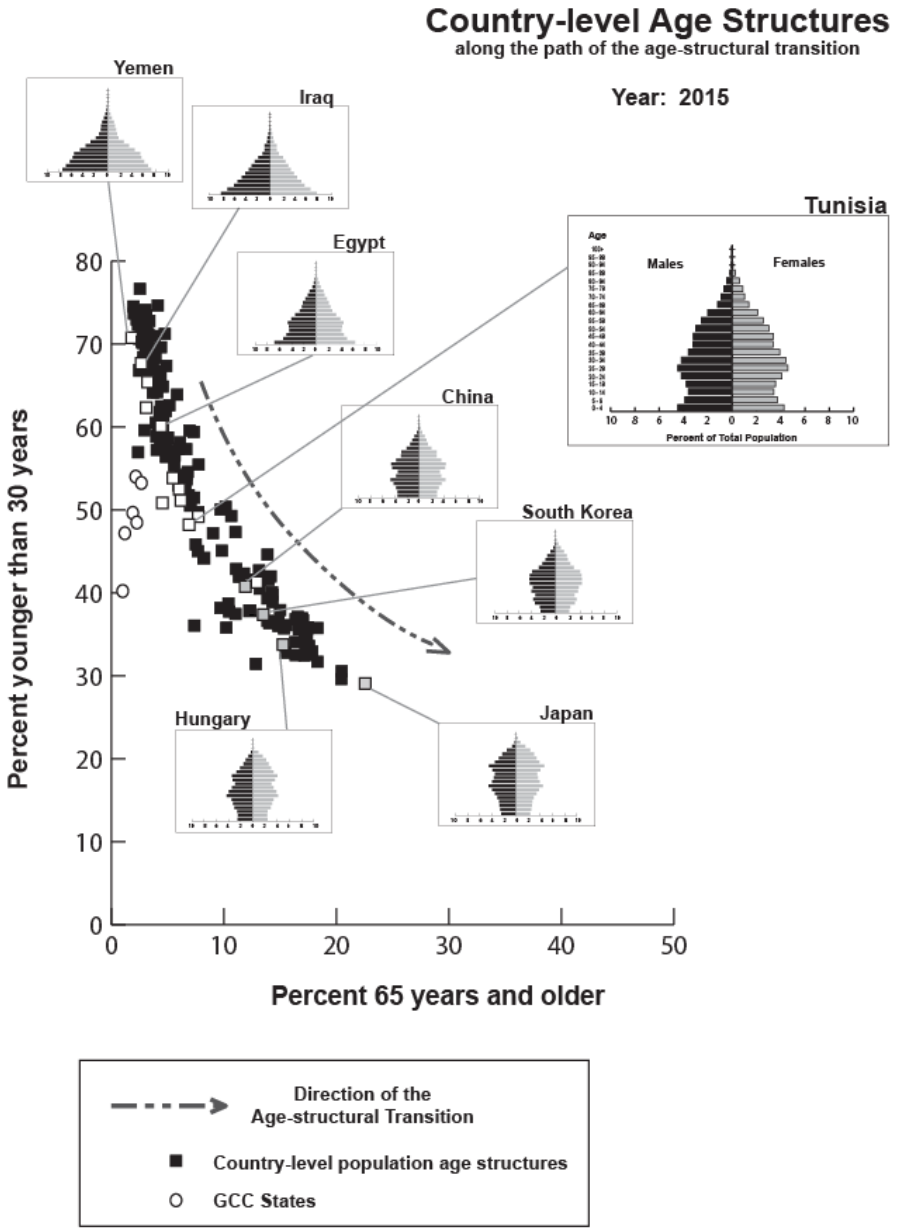


J.M. Schmidt, 2015

The Age-structural Transition

2015

Data: UN Population Division, 2015 Rev.

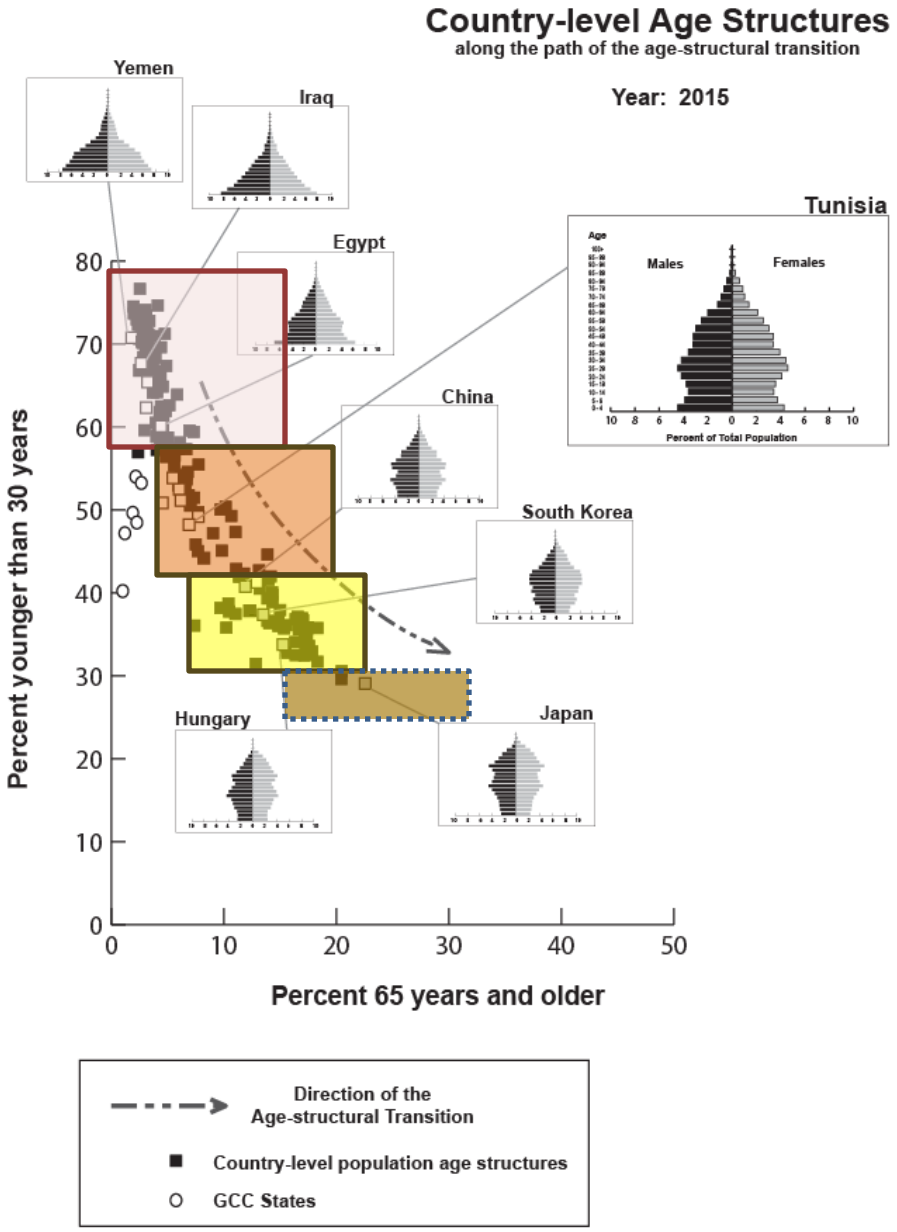


Updated from Cincotta, 2012

The Age-structural Transition

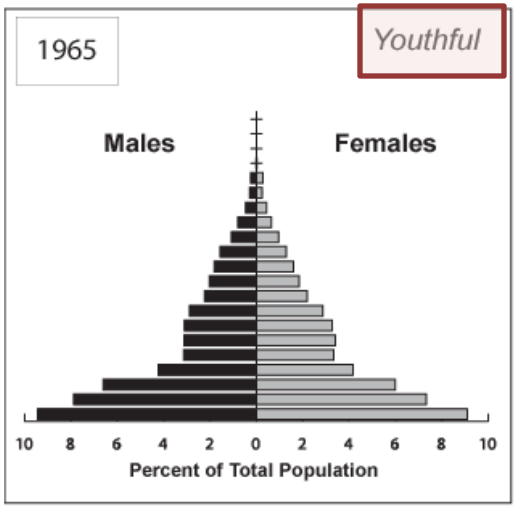
2015

Data: UN Population Division, 2017 Rev.



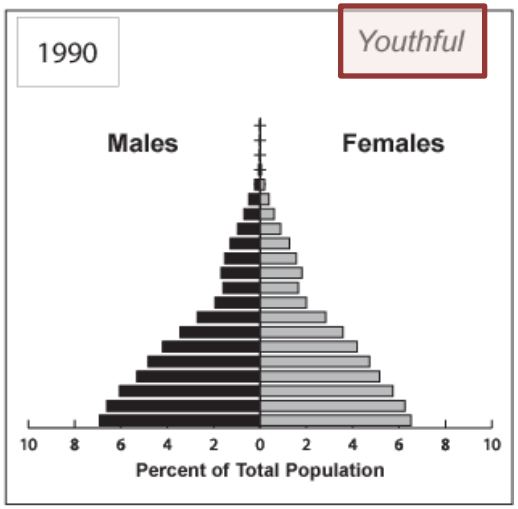
Updated from Cincotta, 2012

Tunisia



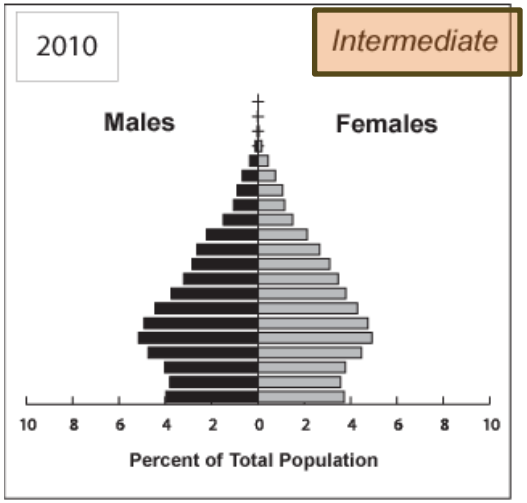
Median age, 17.1

Pop: 4.5 million



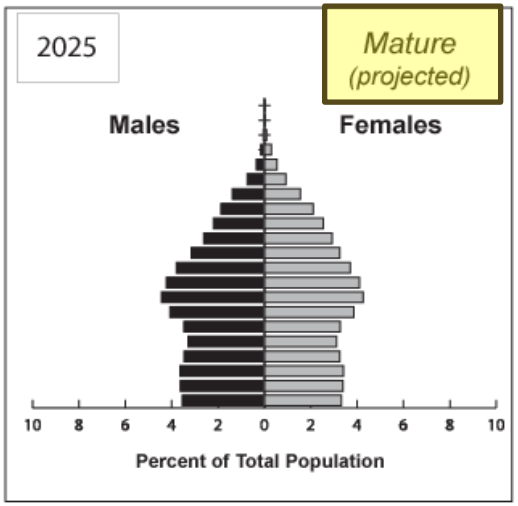
Median age, 20.9

Pop.: 8.2 million



Median age, 29.0

Pop.: 10.6 million

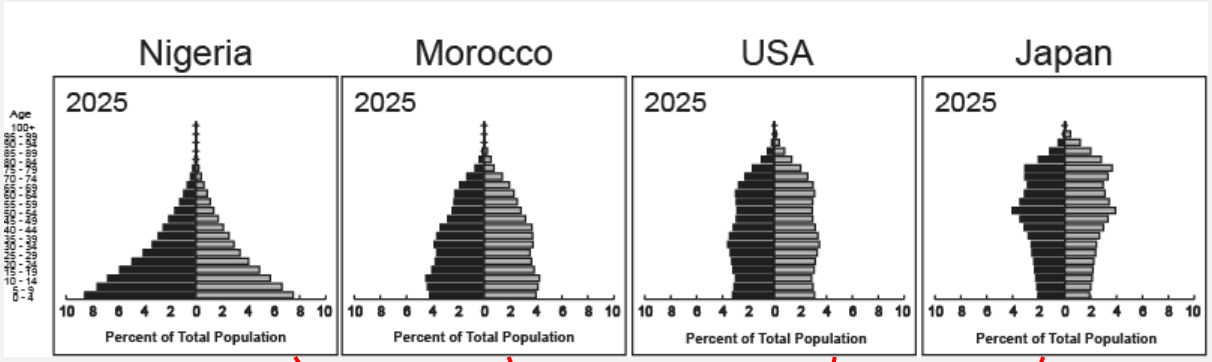


Median age, 35.6

Pop.: 12.3 million

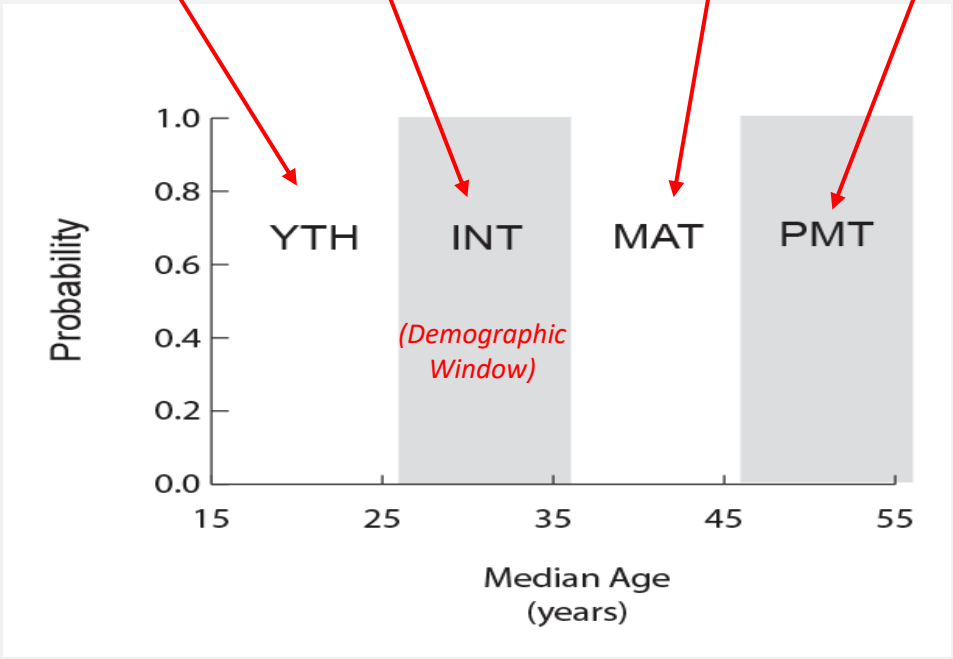
Data: UN Population Div., 2015 Rev.

4 Phases of the Age-structural Transition



Median age (in years)

- Youthful ≤ 25.5
- Intermediate 25.6 to 35.5 (Dem. Window)
- Mature 35.6 to 45.5
- Post-mature ≥ 45.6



Age-structural Timeline

Age-structural Transition

NIC's Four Age-structural Phases

- Youthful (YTH): rapid growth among children, adolescents, young adults; low levels of human capital and institutional capacity (typically low legitimacy). Difficult to generate legitimacy from institutions (because of the large load on them, and low levels of human capital)

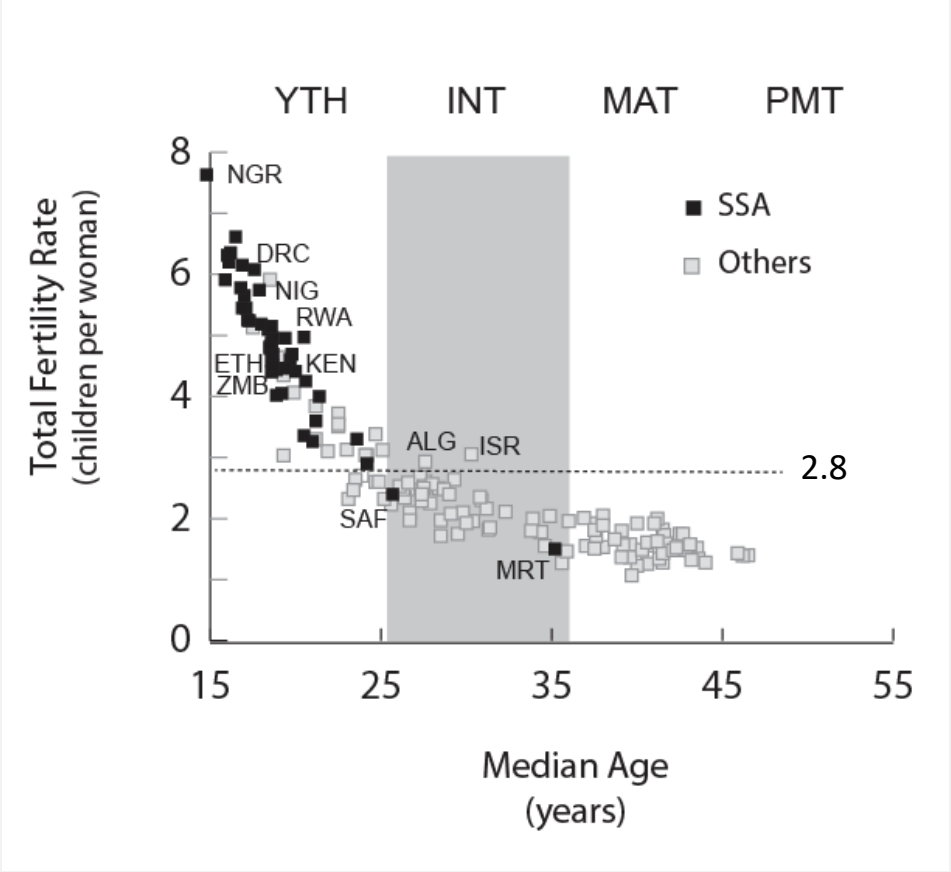
- Intermediate (INT): The demographic window; low levels of dependency; rapidly increasing human capital and institutional capacity (typically gains in legitimacy).

- Mature (MAT): fading of the demographic advantages; society and economy directed by the institution and capacity generated during the window. Need to be preparing institutions/society for the next phase.

- Post-mature (PMT): challenges from large proportion of seniors in adult population; declining workforce size (maybe); unprepared institutions (?); ethnic shifts due to immigration (?).

Sub-Saharan Africa and the Demographic Window

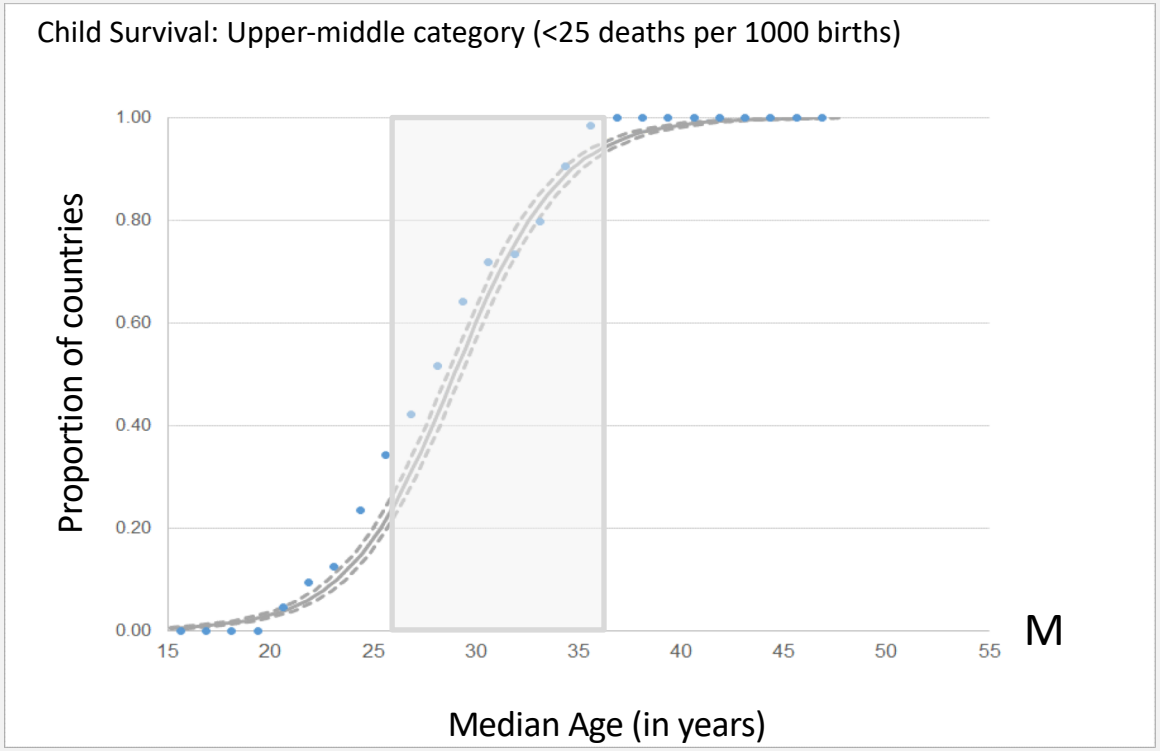
TFR, 2010-15 vs. Median Age, 2015



Age-structural Transition

Building Cumulative Distribution Functions

YTH INT MAT PMT



Age-structural Transition

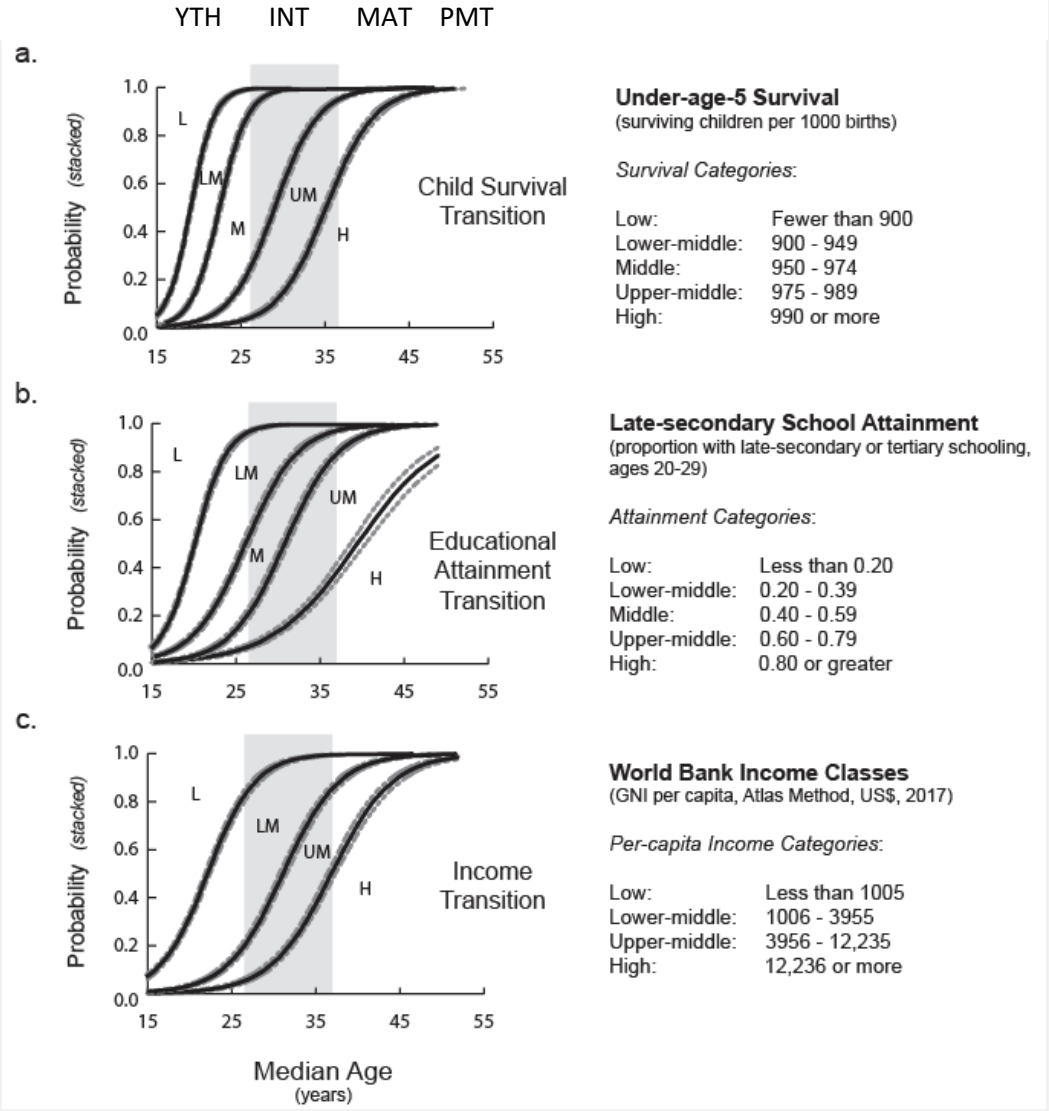
Age Structure & Development

Transitions in:

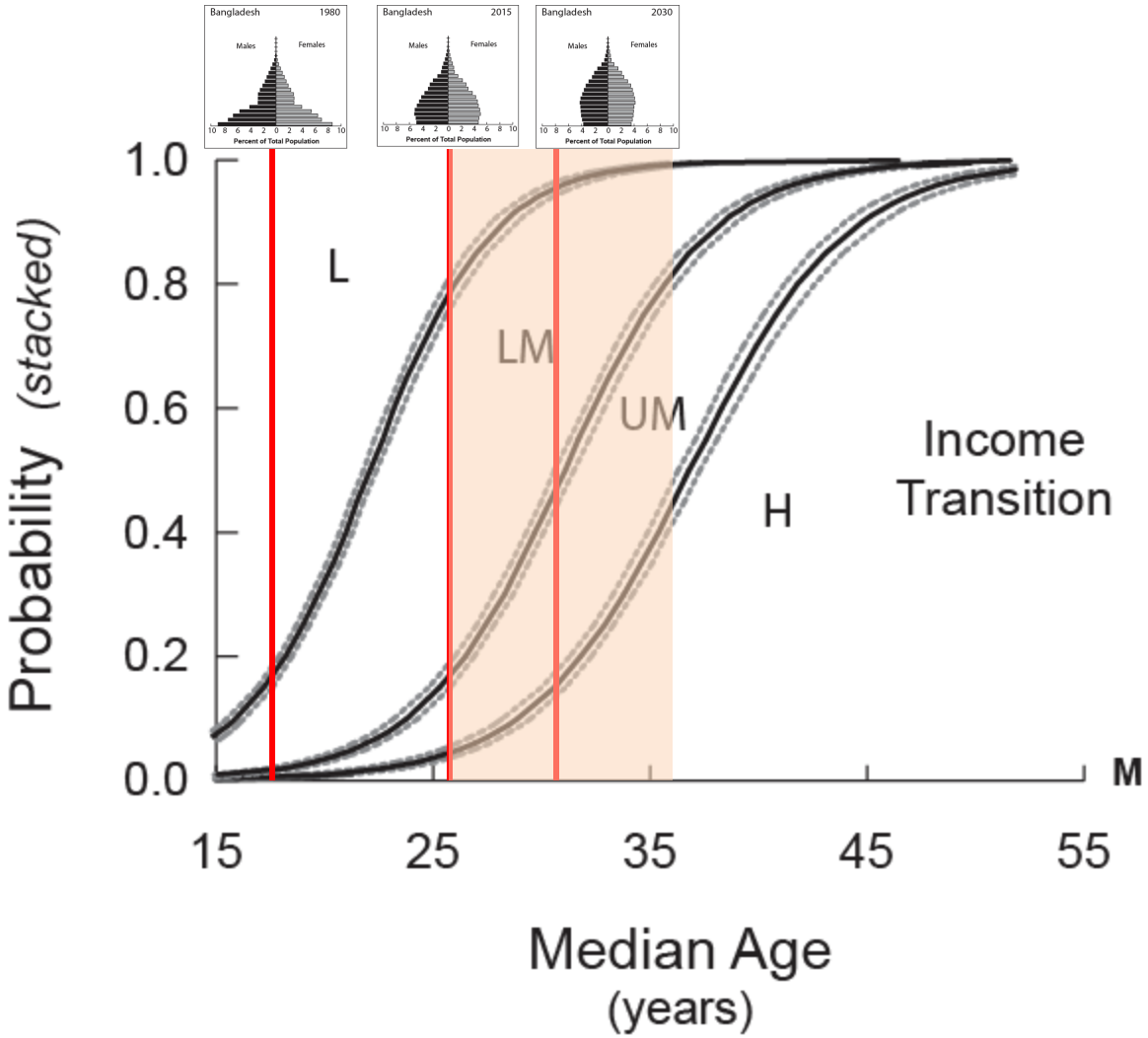
Child survival (UN Pop. Div./WHO)

Late-secondary educational attainment (IIASA/VID)

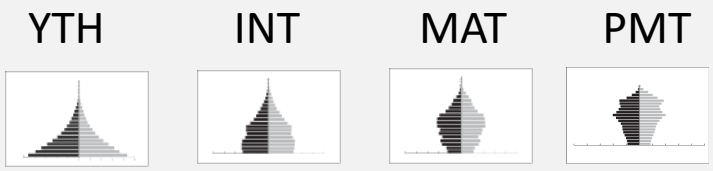
Per-capita income (World Bank, WDI)

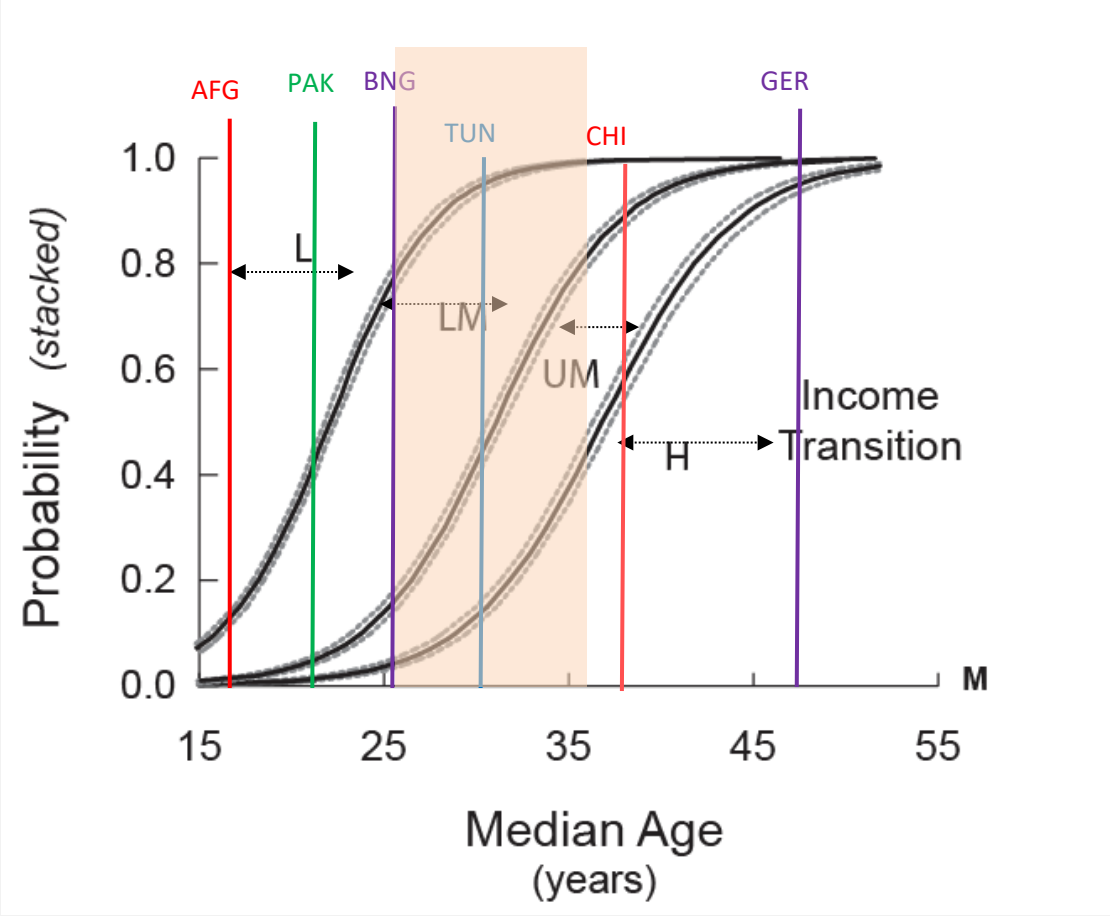


1980 2015 2030

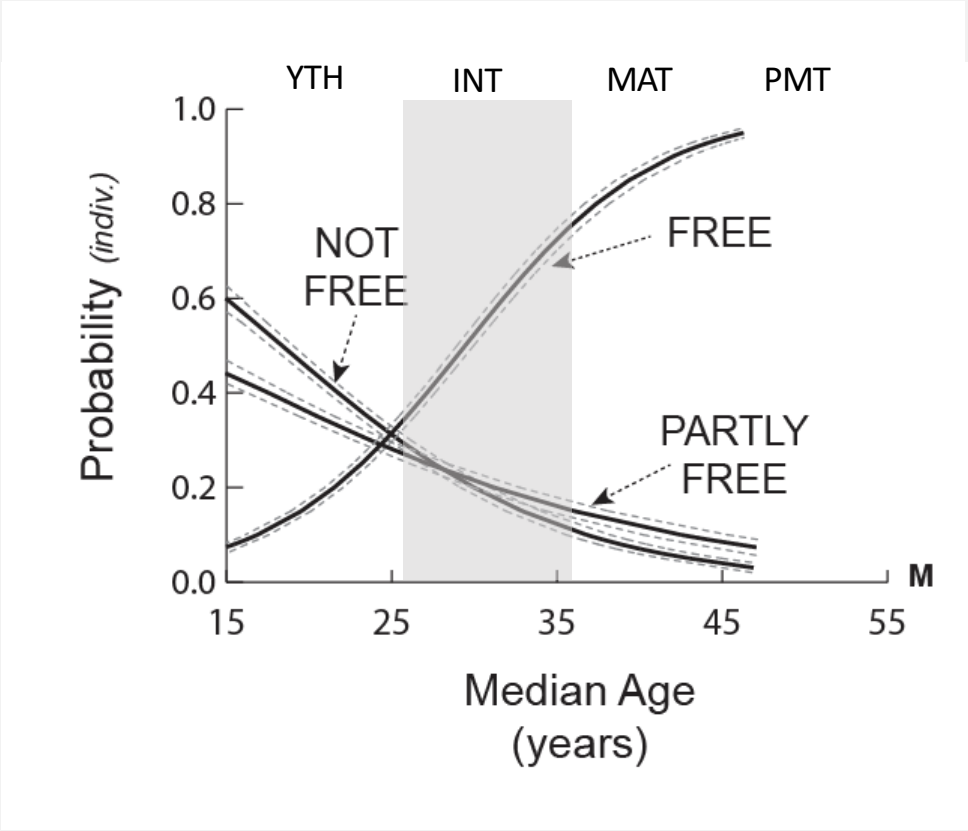


World Bank Income Classes





Political Liberalization Transition

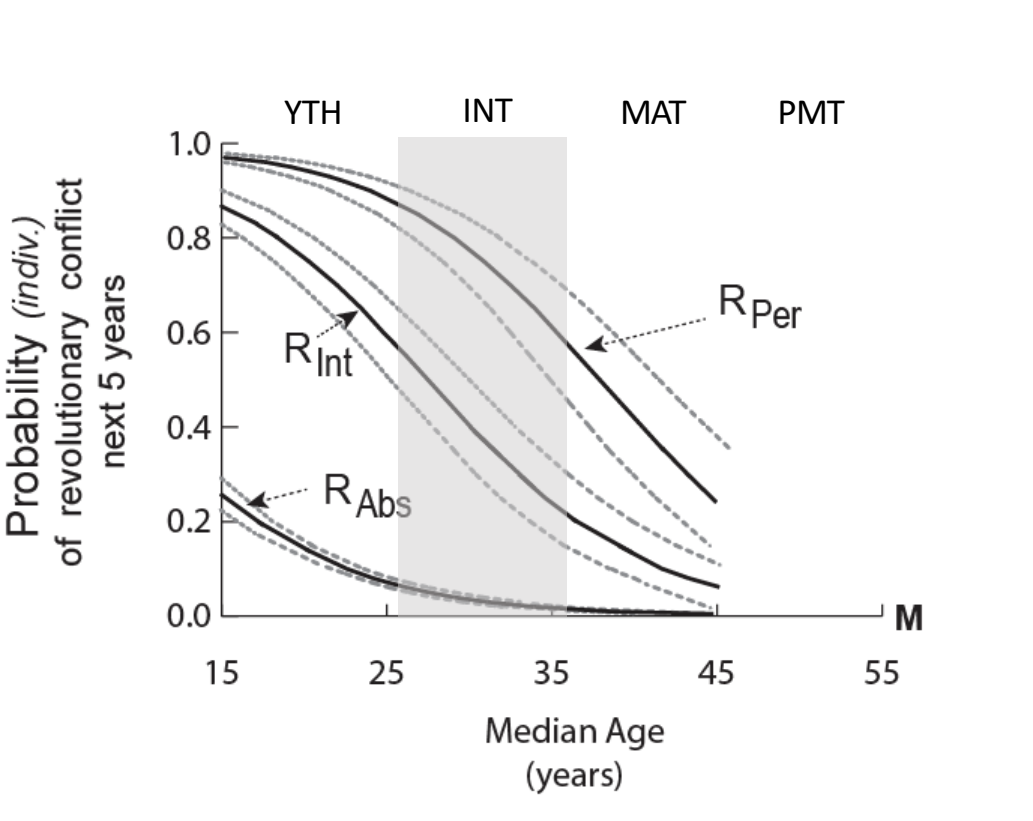


Freedom House freedom status categories, published annually by Freedom House, based on the average of their political rights (PR) and civil liberties (CL) scores (average is called the freedom score).

FREE:	Freedom Scores 2.5 to 1.0
PARTLY FREE:	Freedom Scores 5.0 to 3.0
NOT FREE:	Freedom Scores 7.0 to 5.5

Data: Freedom House (2018), UNPD (2017)

Political Stability Transition



UCDP/PRIO Armed Conflict Database, intra-state, government-focused conflicts (>25 battle-related deaths per year, where the state is one of the armed parties)

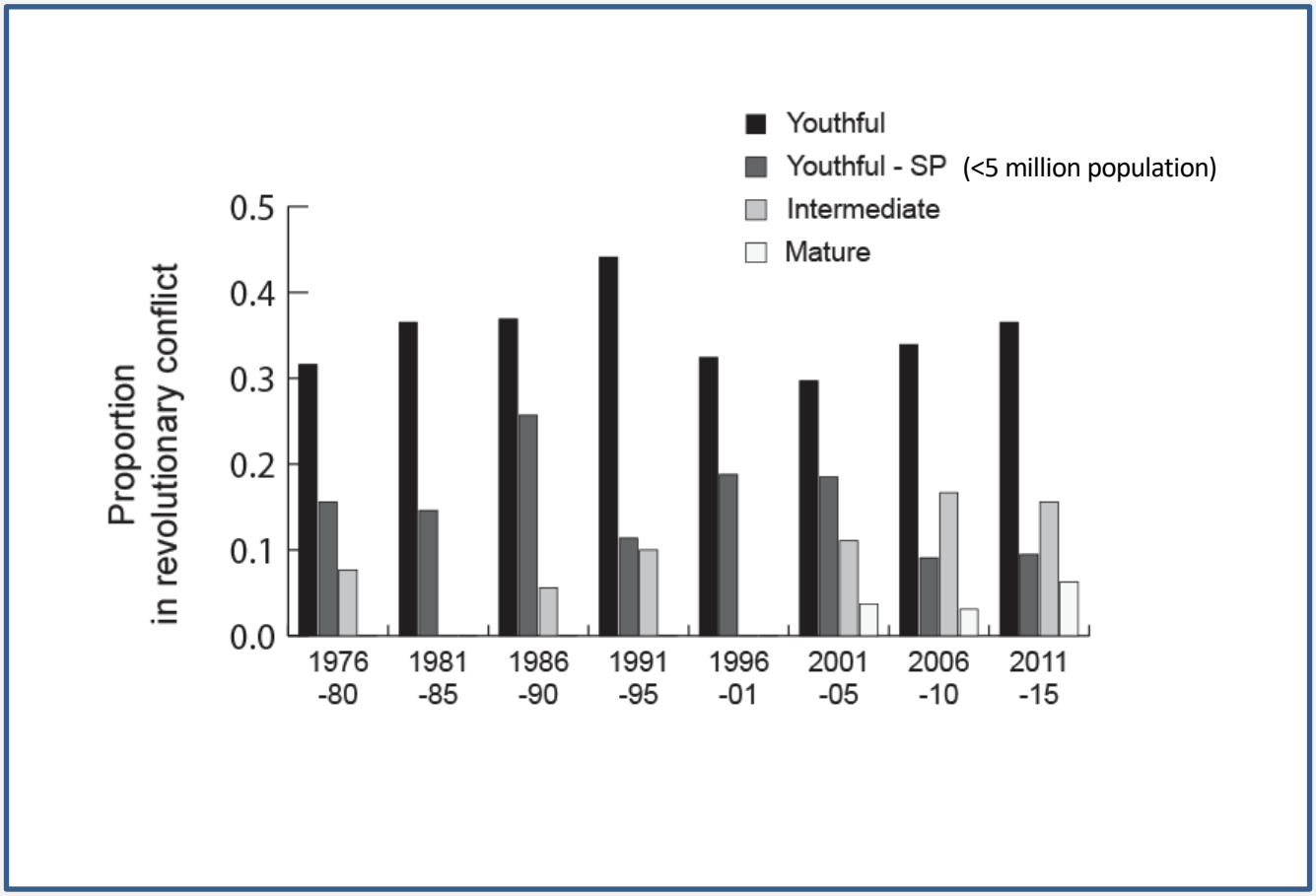
Note: Not a separatist (territorial) conflict.

Conflict History Classes (same type of conflict during prior 4-year)

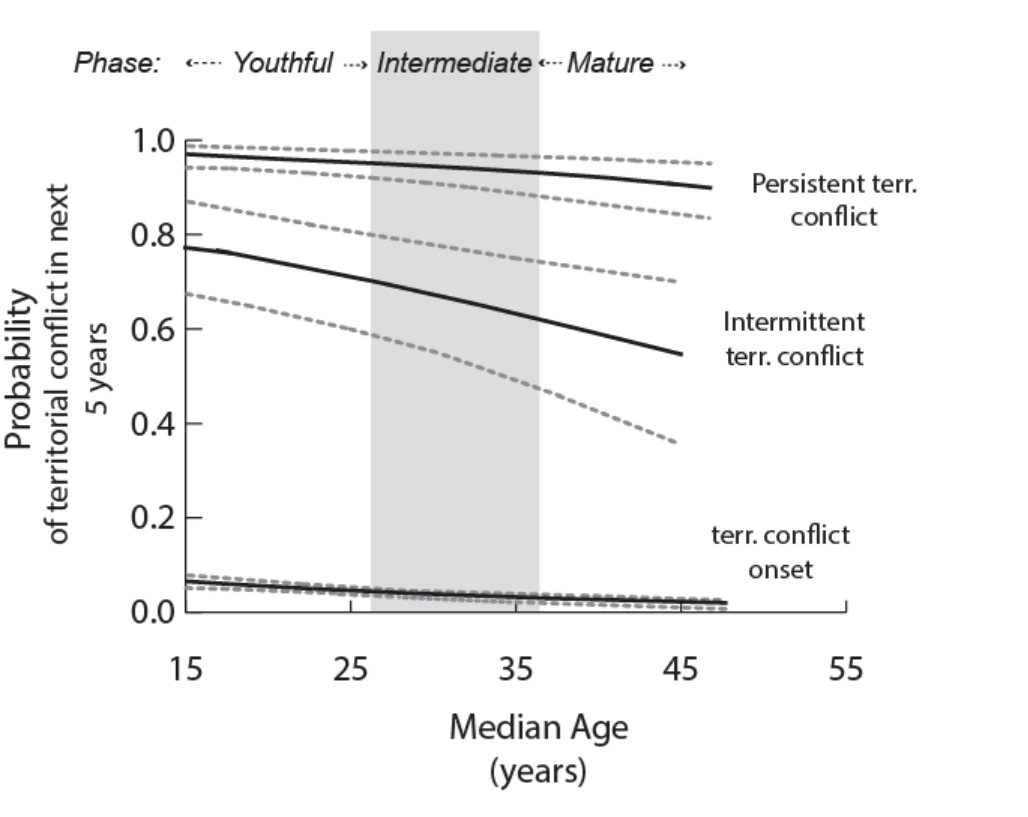
R_{Abs}: 0 years of conflict (absence)
R_{Int}: 1 or 2 years of conflict (intermittence)
R_{Per}: 3 or 4 years of conflict (persistence)

Data: UCDP/PRIO (2017), UNPD (2017)

Revolutionary Conflict: empirical evidence



Territorial (ethnic separatist) Conflicts: Theory

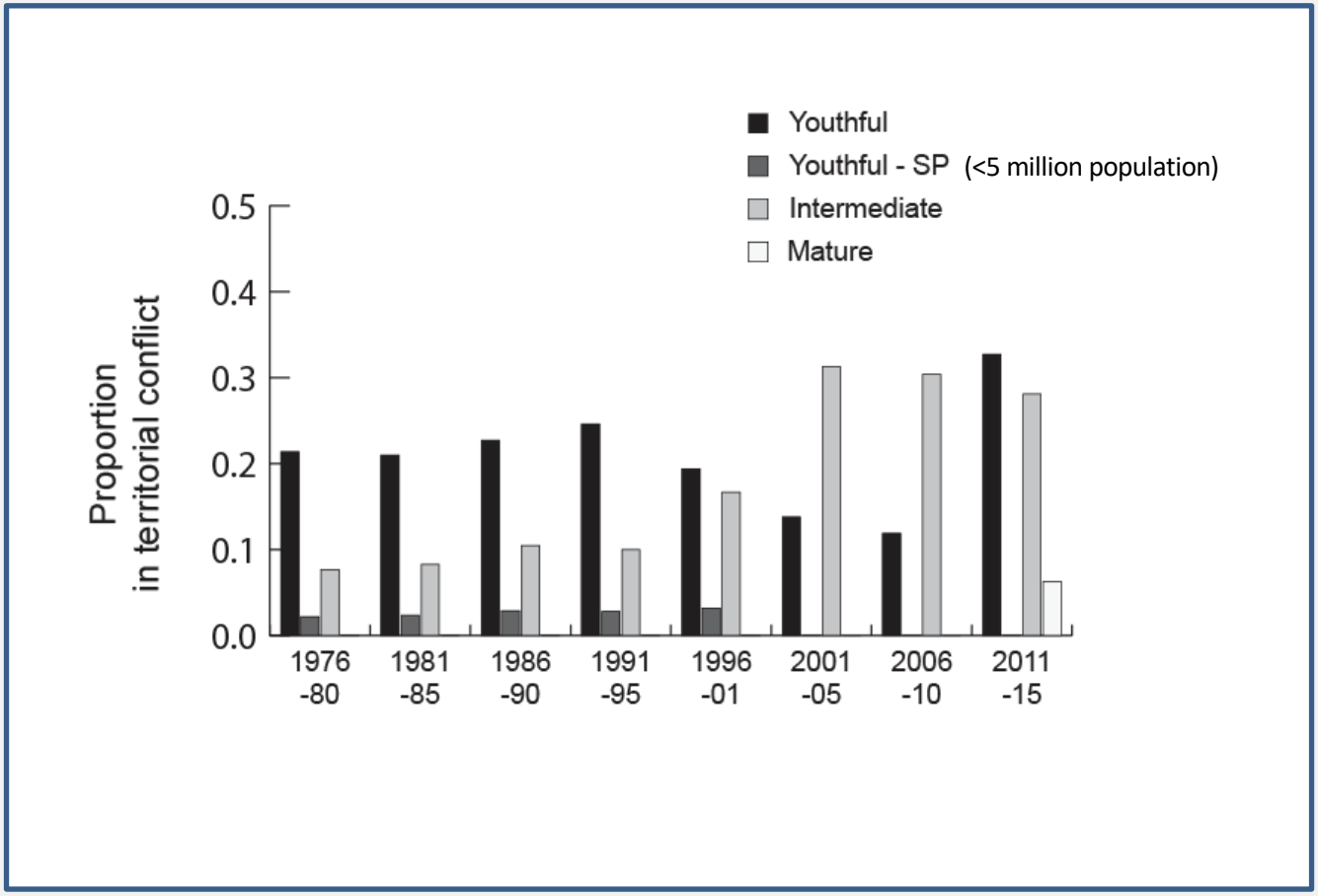


4-year conflict history types

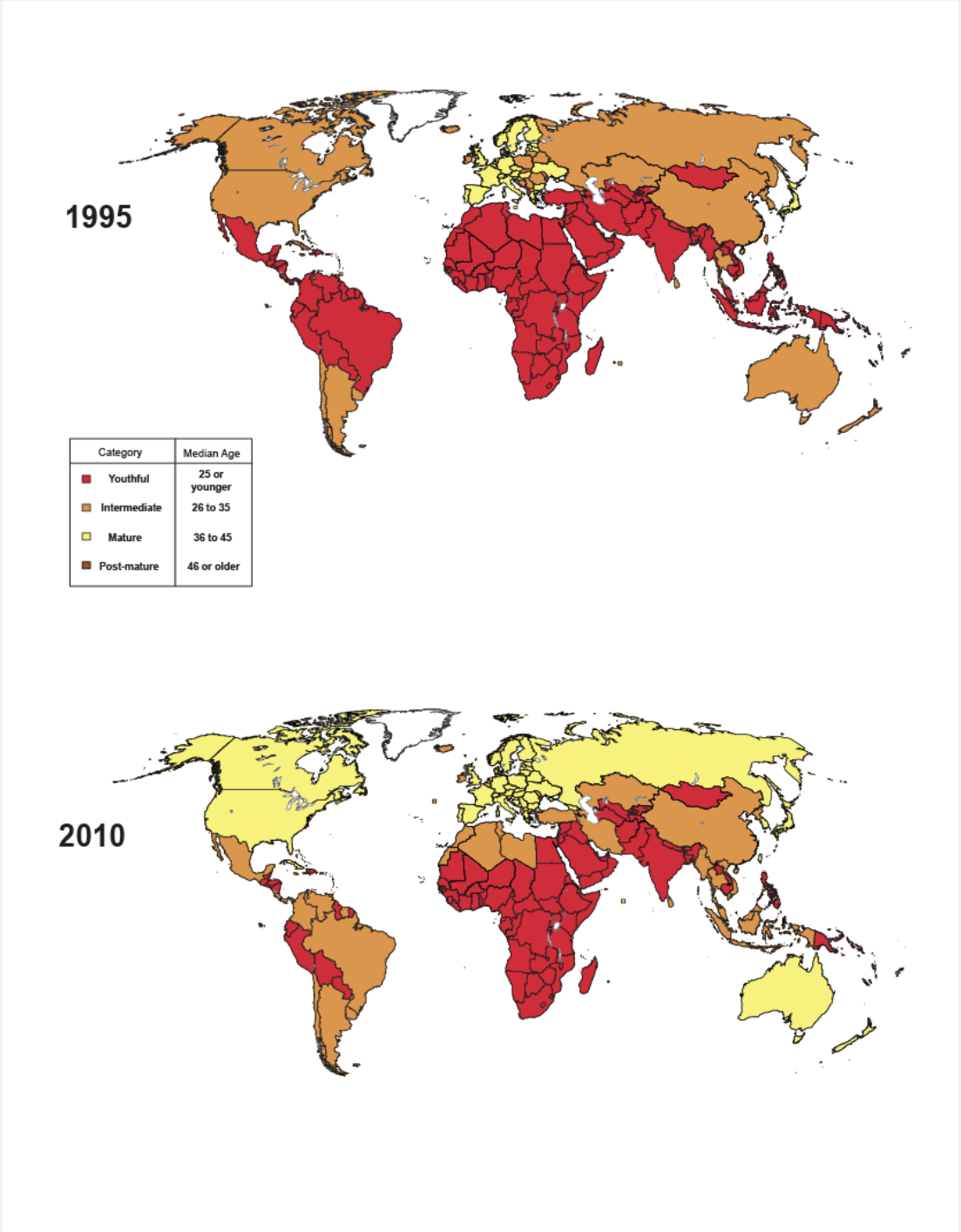
Onset: 0 conflict yrs.
Intermittent: 1 or 2 conflict yrs.
Persistent: 3 or 4 conflict yrs.

Cincotta, in press

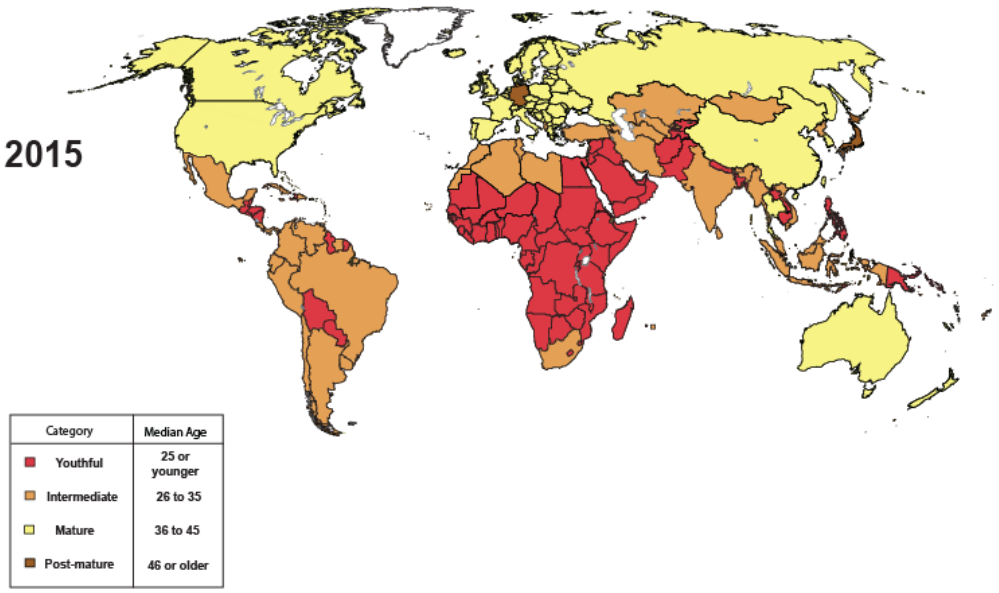
Territorial Conflict: empirical evidence

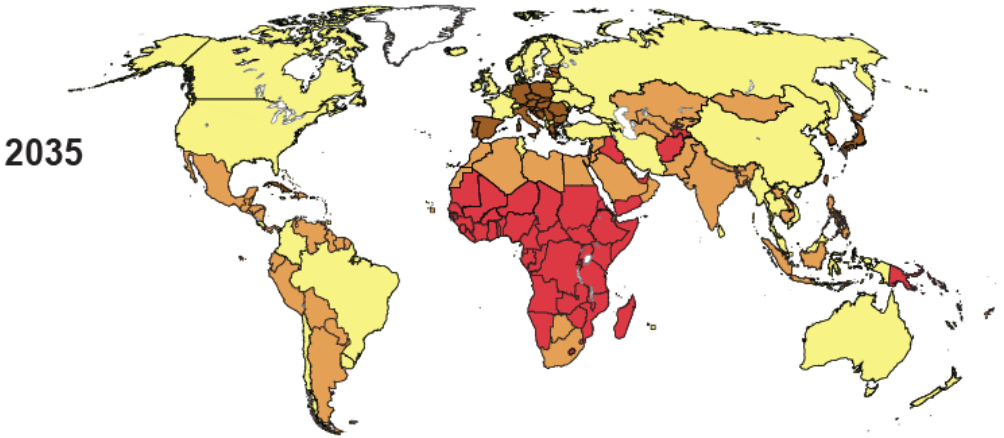


Age-structural Change
1995 to 2010



Age-structural Change
2015 to 2035





Data: UN Population Div., 2015

Cincotta, 2015 *(updated)*

SUMMARY: Ten Rules of Political Demography (1 through 5)

1. Expect youthful states to reside in the lower and lower-middle development categories of child survival, educational attainment, and income. Exceptions are states with small populations (<5 million population), and those with oil/mineral wealth (>15% GDP).

2. Expect states in the intermediate and mature phases (the most age-structurally mature), to experience the best chance of being a liberal democracy – that is, to be assessed as FREE in Freedom House's annual Freedom in the World global survey (most analysts consider FREE status to be synonymous with liberal democracy).

3. Expect states that have a youthful age structure (below a median age of 25.5 years) to be the least likely to be assessed as FREE and the most likely to be engaged in revolutionary conflict (non-separatist conflict) of either low or high intensity, as measured by the Uppsala Conflict Data Program.

4. Where a revolution occurs in a state with a youthful population, expect either the authoritarian regime to remain in power or to be replaced by another authoritarian regime (typically NOT FREE or low-level PARTLY FREE, as measured by Freedom House).

5. Expect states that achieve FREE while youthful to lose this rating within a decade. There is a long history of this effect; Mali is a recent example.

Ten Rules of Political Demography (6 through 10)

6. Expect states with a population of less than 5 million to be the most likely to break rules 1, 2, 3, 4, and 5 (see the UN Population Division for population data).

7. Expect revolutionary conflicts to end or de-escalate when countries move into the intermediate phase. However, this trend is much less pronounced among ethnic separatist conflicts, where it is often responsive to sub-state demography.

8. Expect states that are ruled by an ideological single-party regime or another type of ideological political monopoly – for example, Iran's theocracy – to mature without liberalization. China and North Korea are other prominent examples, and so far, have had no successional issues.

9. Expect states led by a revolutionary leader (Cuba under Castro, Venezuela under Chavez) or a charismatic reformer (Russia under Putin, Turkey under Erdogan, Singapore under Lee Kwan Yu) to resist attaining FREE. Expect these regimes to have successional problems.

10. Expect a state ruled by a military junta/ruler or absolute monarch to yield to a more democratic regime before the population attains a mature age-structure (before a median age of 35.5 years).

The Age-structural Theory of State Behavior

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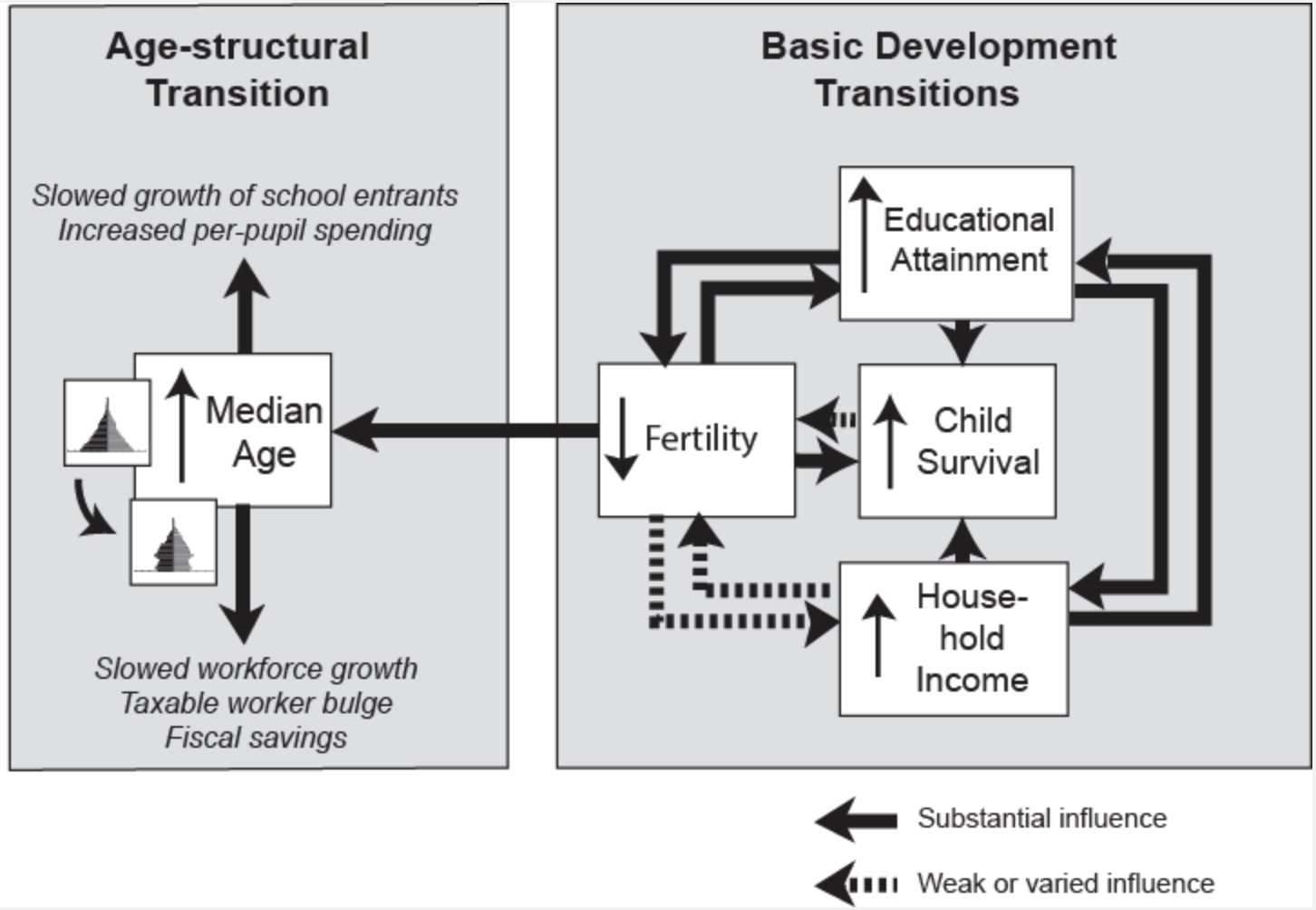
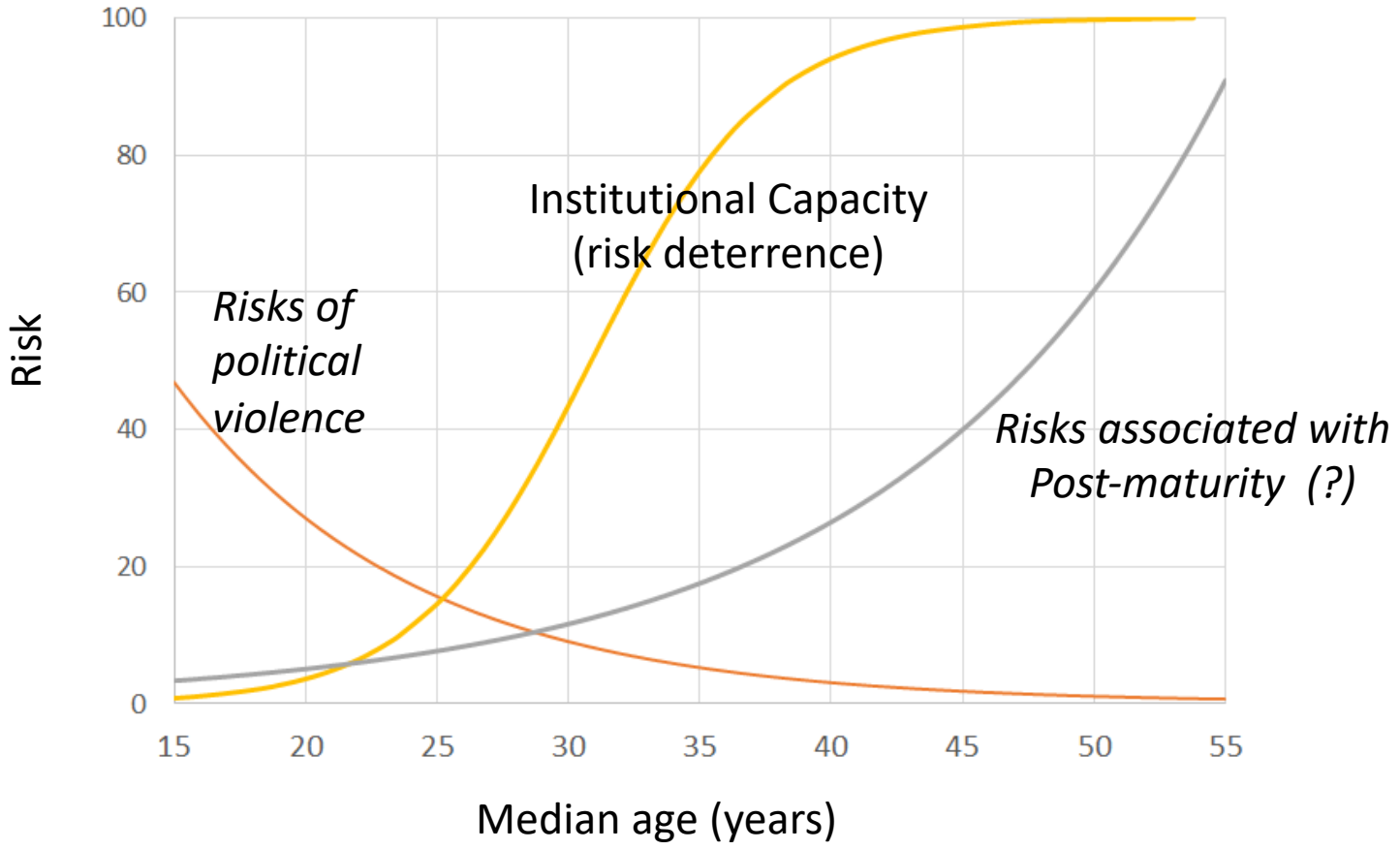
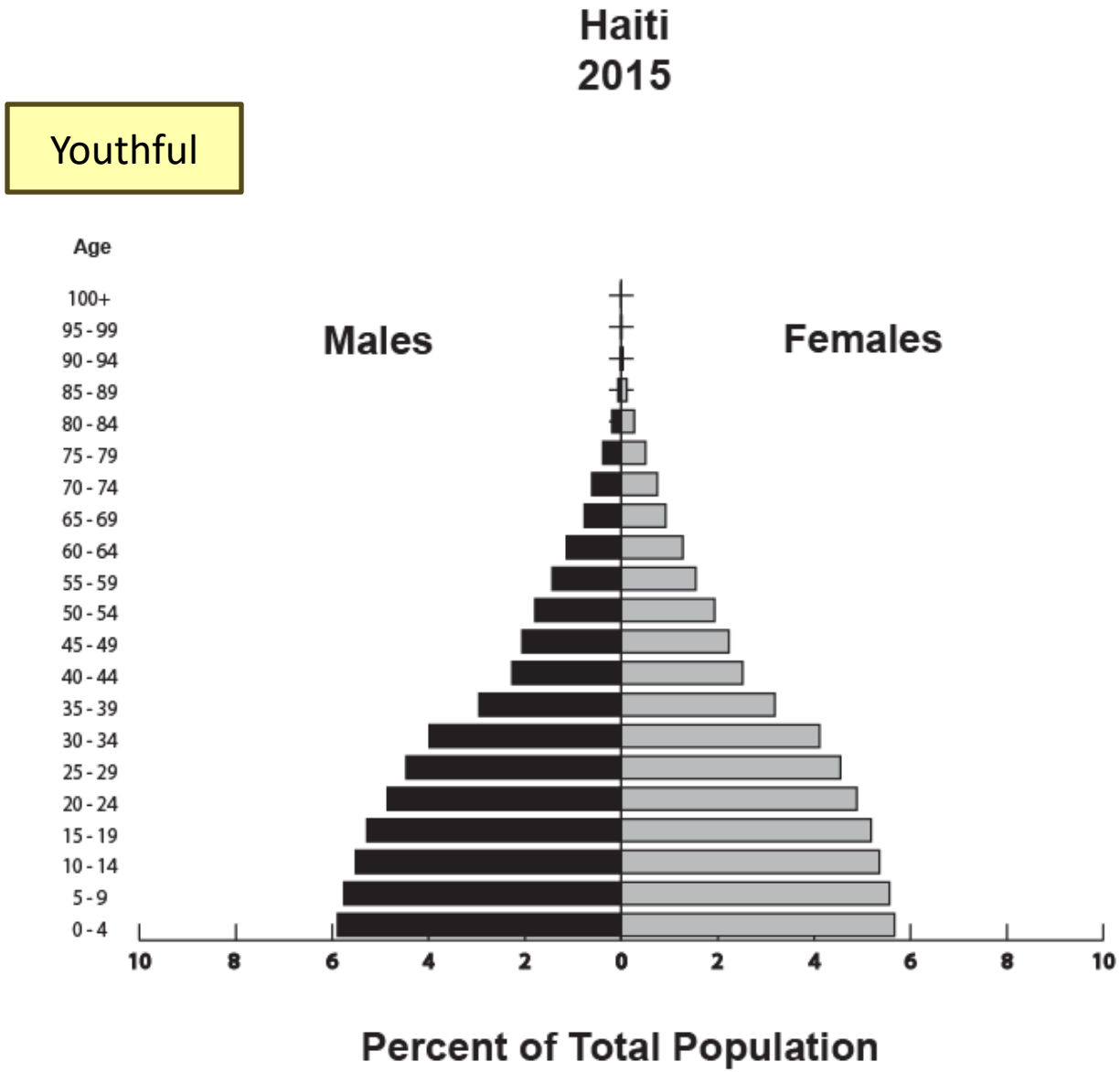
Why does median age predict development?

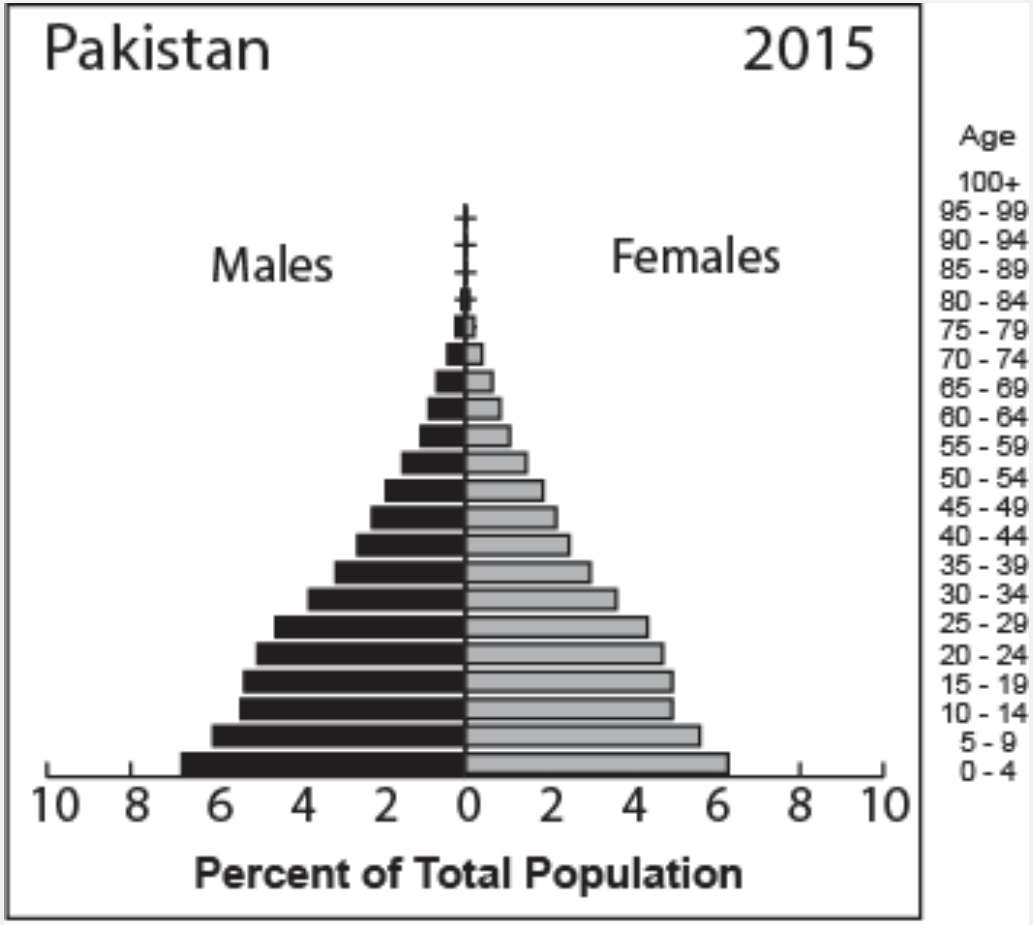



100
80
60
40
20
0
Risk
15
20
25
30
35
40
45
50
55
Median age (years)
Institutional Capacity
(risk deterrence)
Risks of
political
violence
Risks associated with
Post-maturity (?)

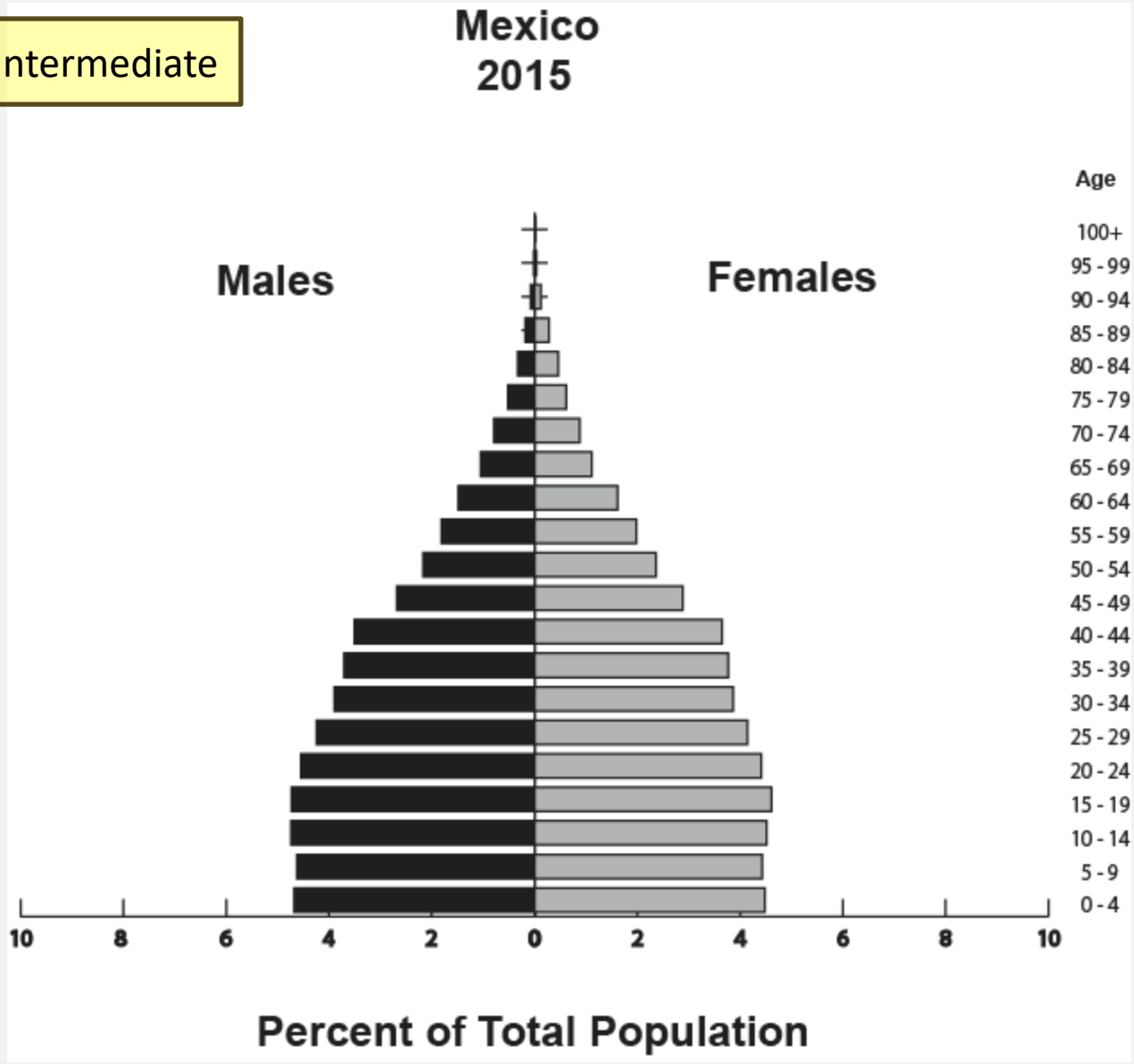


Median age: 23 yrs.

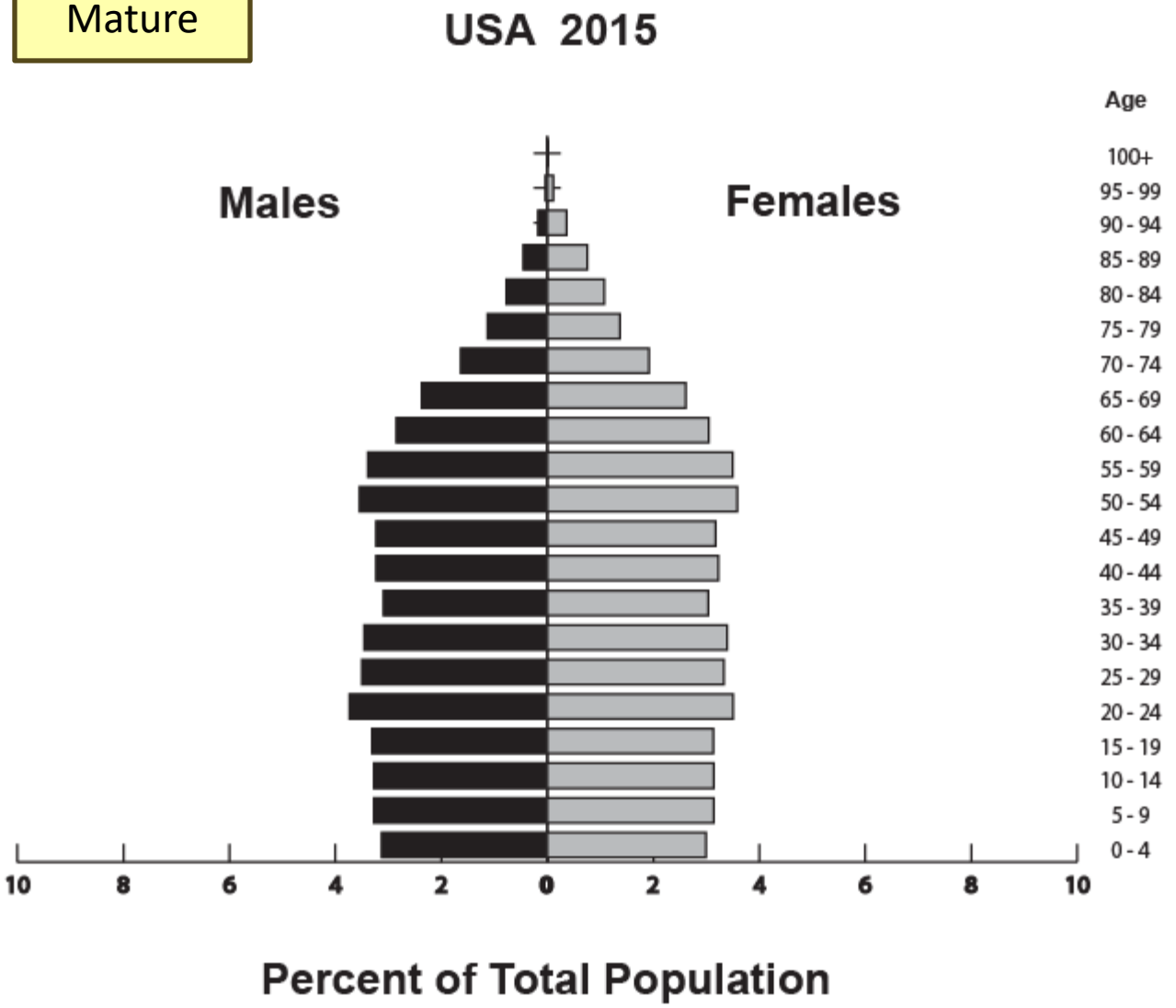
Youthful


Pakistan
2015
Males
Females
Age
100+
95 - 99
90 - 94
85 - 89
80 - 84
75 - 79
70 - 74
65 - 69
60 - 64
55 - 59
50 - 54
45 - 49
40 - 44
35 - 39
30 - 34
25 - 29
20 - 24
15 - 19
10 - 14
5 - 9
0 - 4
10 8 6 4 2 0 2 4 6 8 10
Percent of Total Population

Intermediate

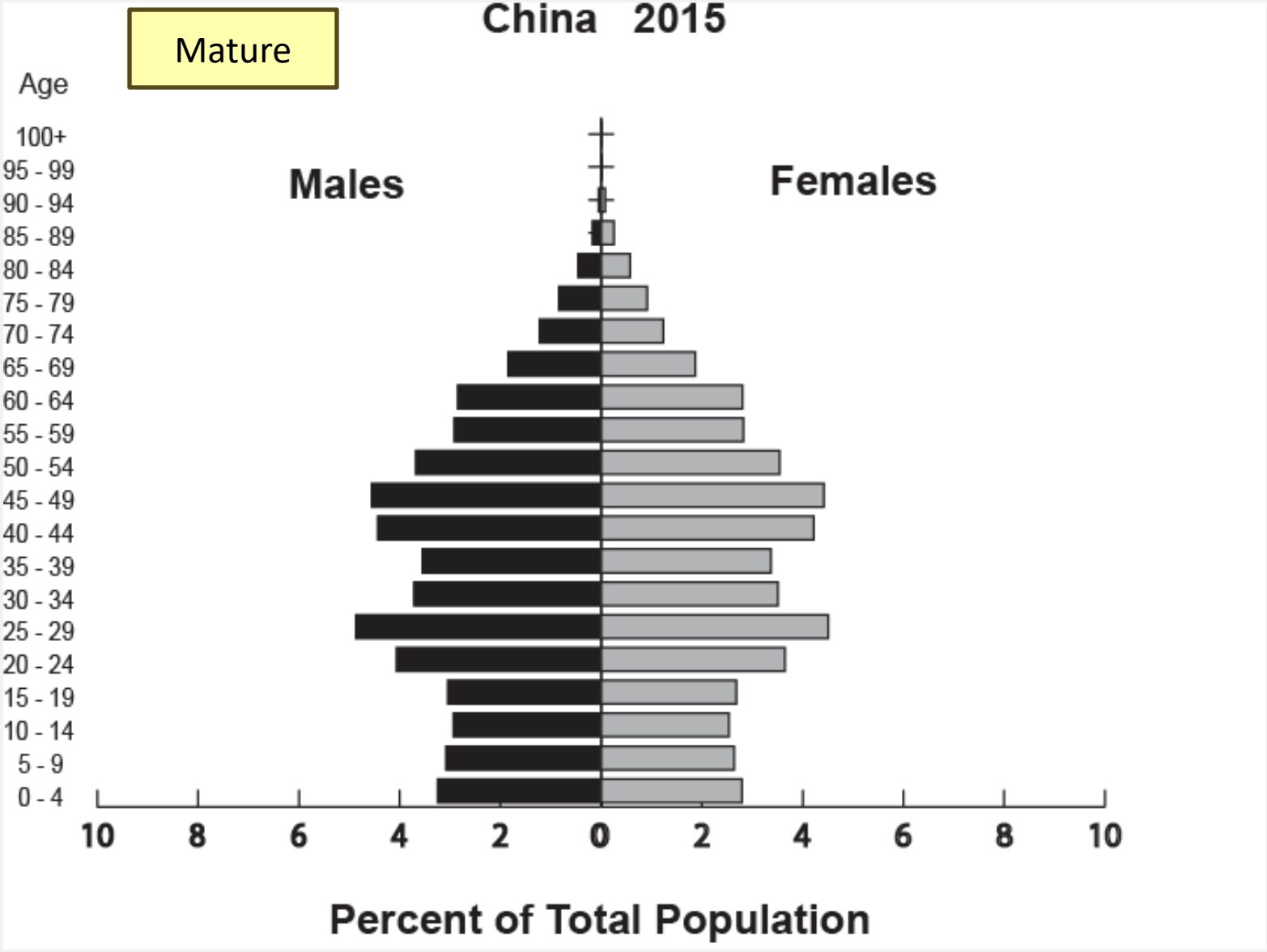


Mature



Median age: 38 yrs.

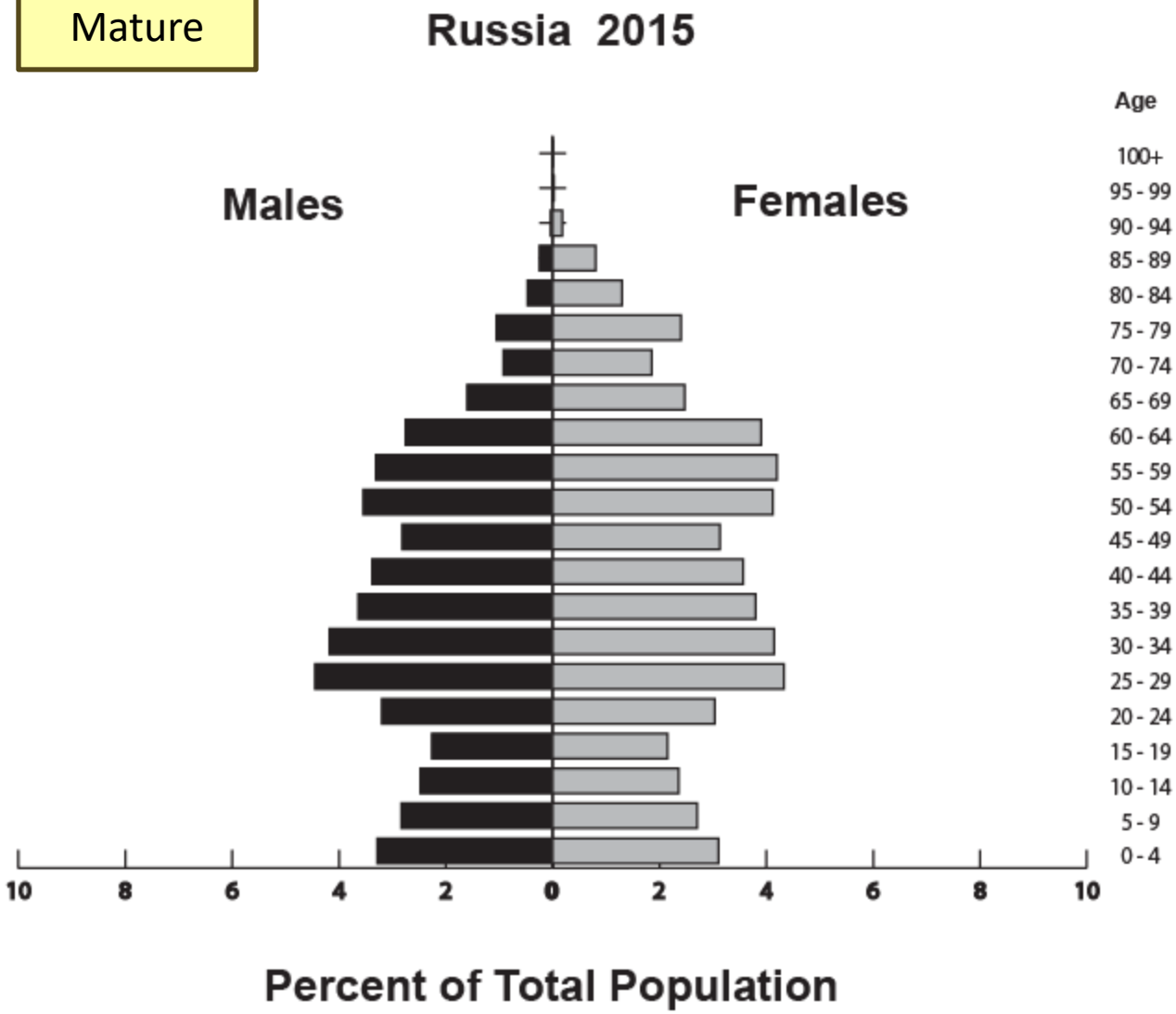
Data: UN Population Div., 2017 Rev.



Median age: 37 yrs.

Data: UN Population Div., 2017 Rev.

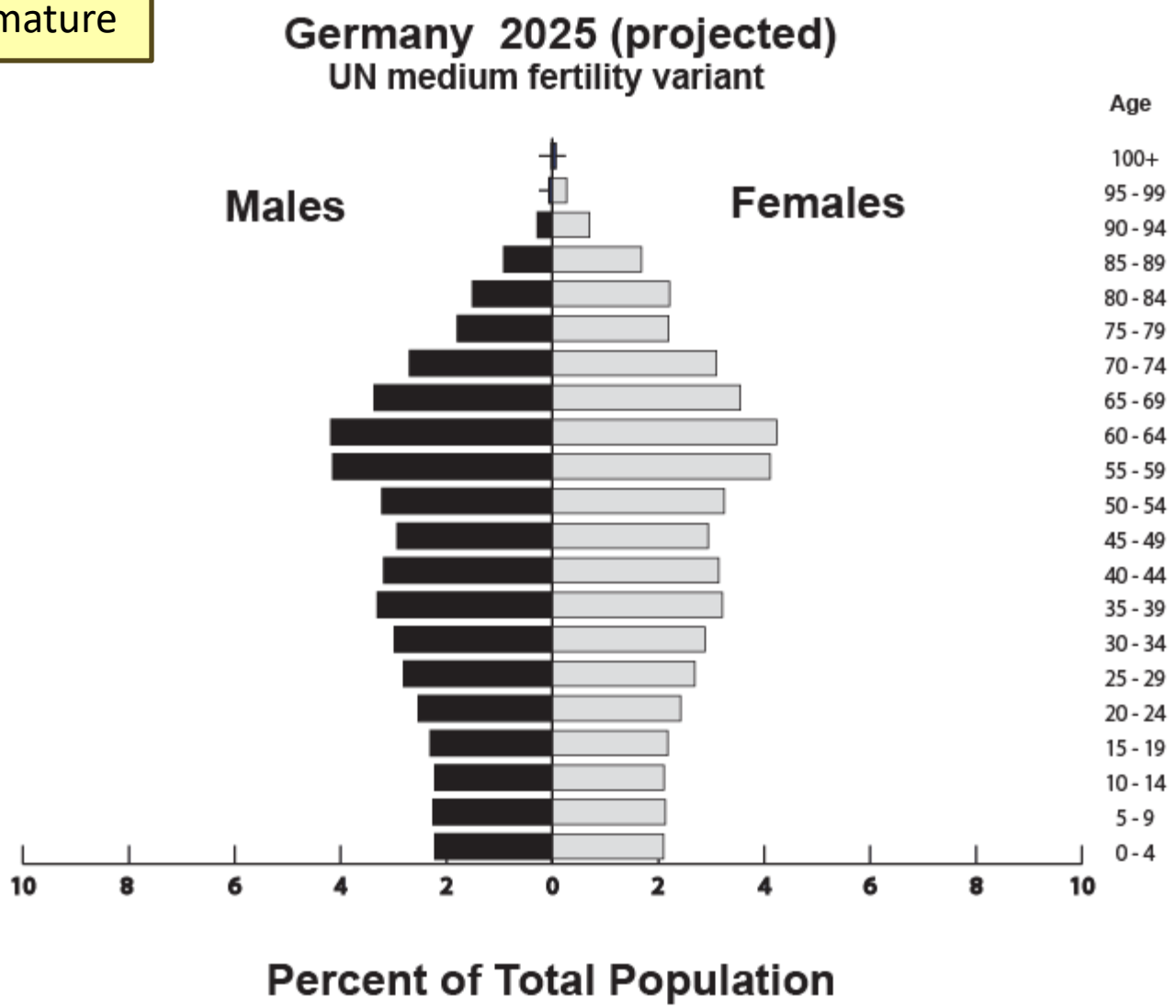
Mature



Median age: 39 yrs.

Data: UN Population Div., 2017 Rev.

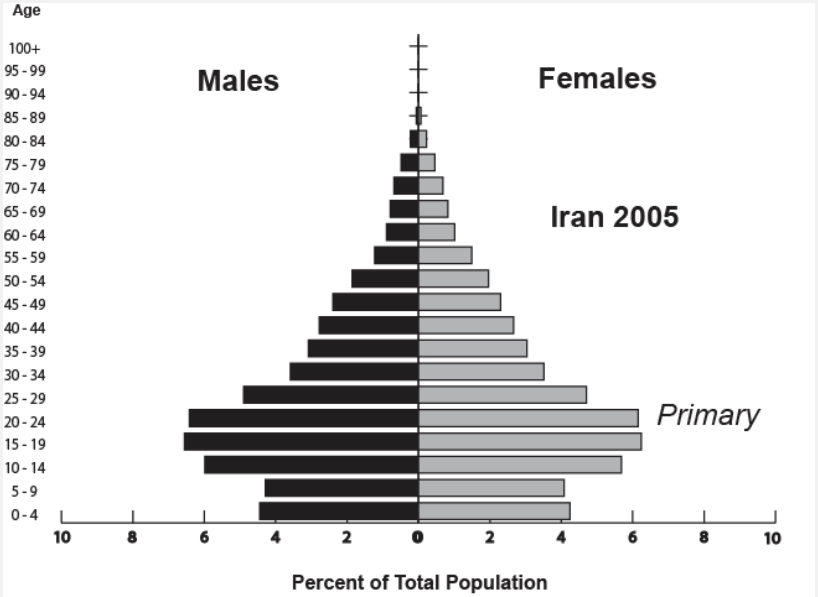
Post-mature



Projected Median age: 49 yrs.

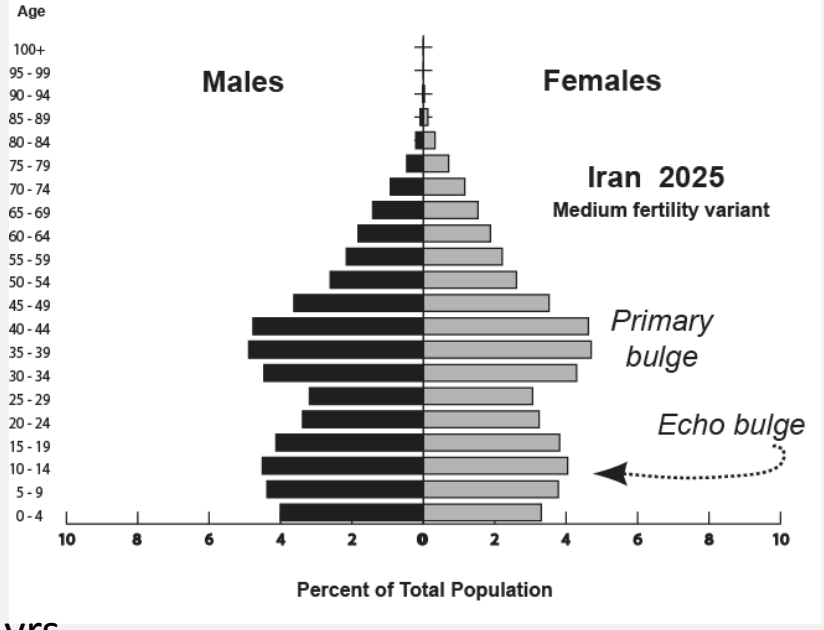
Data: UN Population Div., 2017 Rev.

Youthful



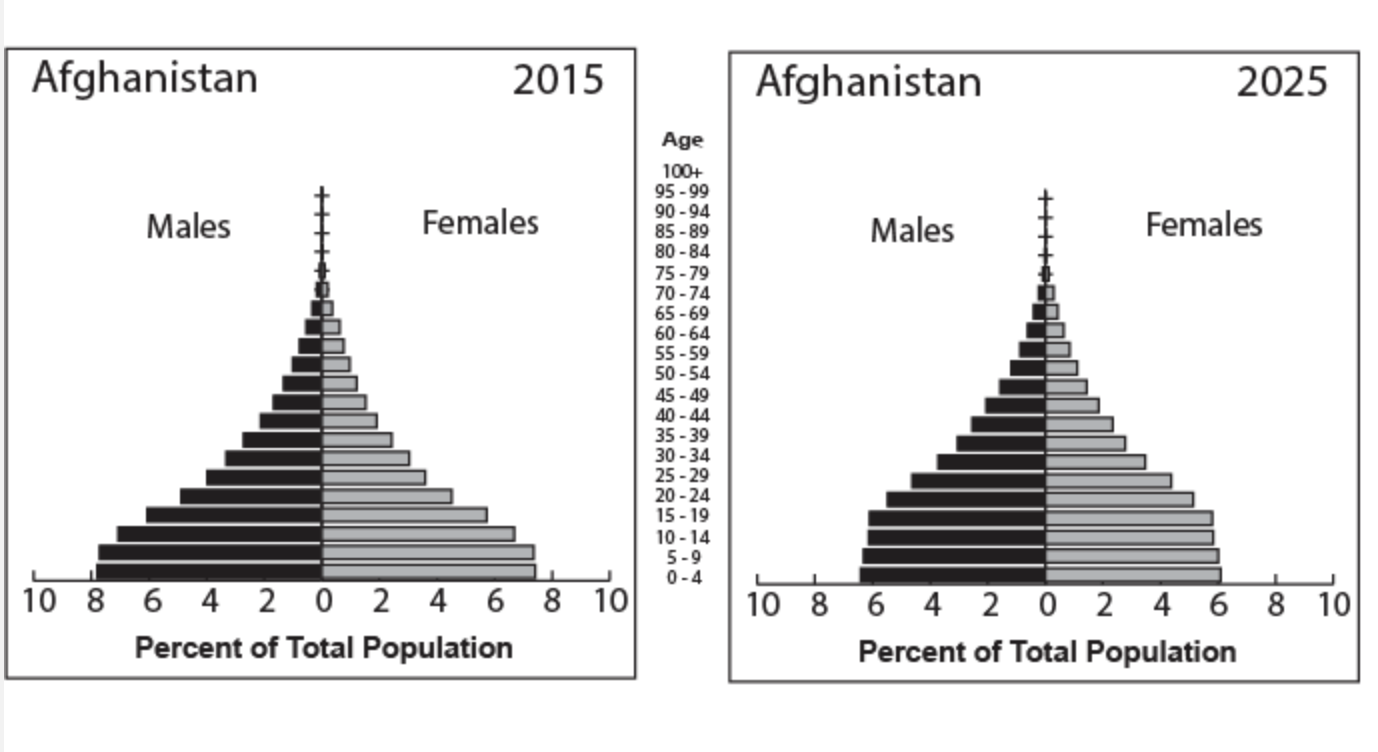
Median age: 24 yrs.

Intermediate



Projected Median age: 35 yrs.

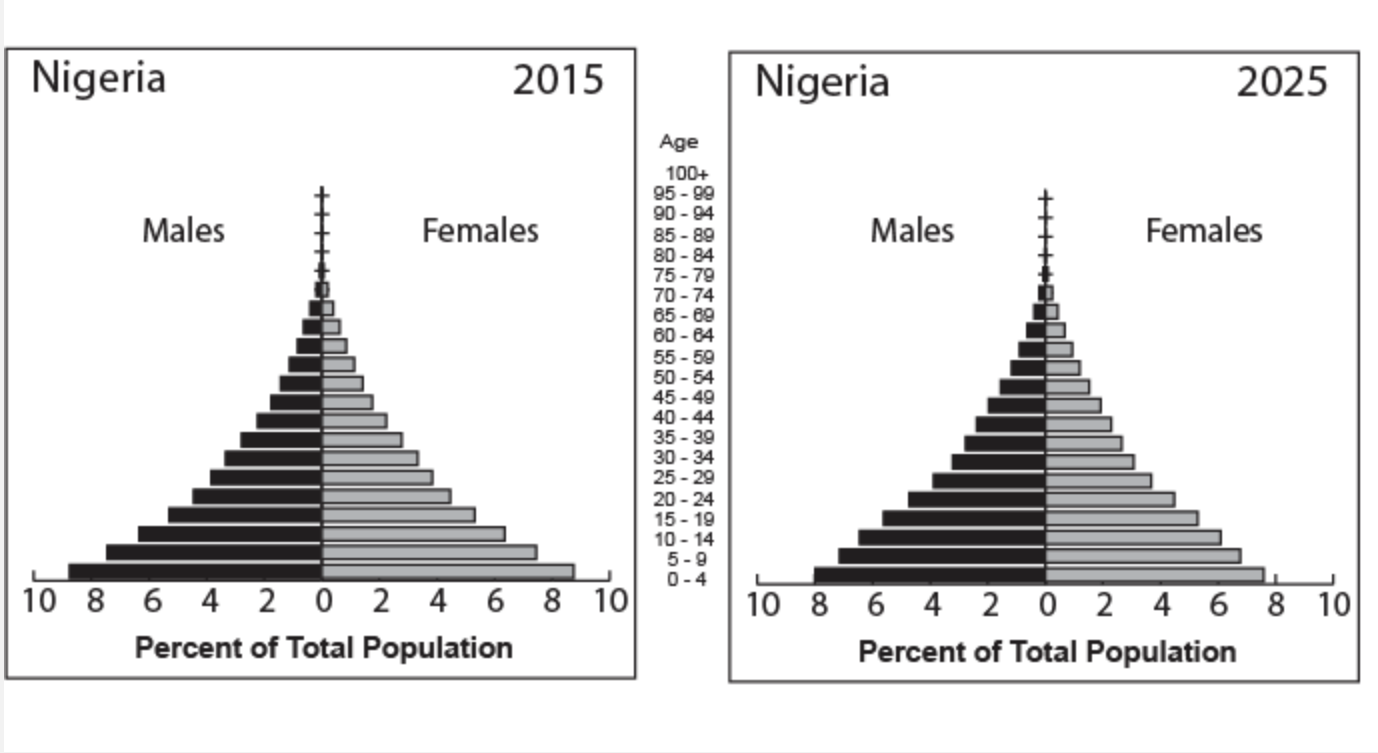
Afghanistan



Population: 32.5 million

40.2 million
(UN medium projection)

Nigeria



Population: 182 million

233 million
(UN medium projection)

The Predictive Value of Population Age Structure

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